

Translation

PATENT COOPERATION TREATY

PCT/EP2003/009592



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference A 54 641 PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/EP2003/009592 | International filing date (day/month/year) 29 August 2003 (29.08.2003) | Priority date (day/month/year) 25 September 2002 (25.09.2002) |
| International Patent Classification (IPC) or national classification and IPC B60R 21/01 | | |
| Applicant ACTS - ADVANCED CAR TECHNOLOGY SYSTEMS GMBH & CO. KG | | |

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|--|--|
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>3</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | |

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|---|--|
| Date of submission of the demand 25 March 2004 (25.03.2004) | Date of completion of this report 15 October 2004 (15.10.2004) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/009592

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1-8 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ 6-12 _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* 1-4, 13-19 received by this Authority on 18 August 2004 (18.08.2004)
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages _____ 1/4-4/4 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/09592

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|-----------|-----|
| Novelty (N) | Claims | 1-4, 6-19 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-4, 6-19 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-4, 6-19 | YES |
| | Claims | | NO |

2. Citations and explanations

Reference is made to the following documents:

D1: DE-A-100 23 588, Robert Bosch GmbH, 29 November 2001

D2: EP-A-0 995 639, Ford Motor Co., 26 April 2000

1. Independent Claim 1

Novelty:

Document D1 discloses (see in particular figures 4 and 2): A sensor arrangement for detecting an external impact load on a vehicle (figures 5 and 6), particularly upon impact with a pedestrian (the sensor known from D1 is likewise intended for applications involving the car bumper; see column 3, lines 6-11), with at least one sensor line (3) that responds to mechanical deformation, a support body (2 and 5) that contains the sensor line and a measuring unit (14 and 19) that functions together with the sensor line to provide an impact signal, said support body having a deformation structure (4; see figure 2 in particular) that cooperates with the sensor line (3) in order to transmit compressive force that varies by section.

Document D2 likewise discloses a sensor arrangement according to the preamble of claim 1.

The subject matter of the present claim 1 differs from the above in that the deformation structure for transmitting compressive force that varies by section includes a plurality of force transmission members distributed at irregular distances from one another along the sensor line.

Therefore, the present application fulfills the criterion set out in PCT Article 33(2) because the subject matter of independent claim 1 is novel in relation to the prior art as defined in the Regulations (PCT Rule 64.1 to 64.3).

Inventive Step:

Proceeding from the cited prior art, the problem to be solved by the present invention can thus be seen as that of developing an arrangement according to the preamble of document D1 such that it is possible to detect impacts and record collisions selectively and securely, especially with a design suitable for economical mass production.

The statement of the specific problem described above was obvious at least insofar as it falls within the scope of normal activity for a person skilled in the art.

However, the solution according to claim 1 does not appear to be known *per se* from any of the documents of the procedure, nor does it appear obvious from the prior art as a whole.

2. Dependent Claims 2-4 and 6-19

The aforementioned dependent claims, the subject matter of which relates to further developments of the invention according to claim 1, likewise appear to satisfy the requirements of PCT Article 33(1) to (4).

3. Industrial Applicability

The device and method according to claims 1 and 18 also appear to satisfy the requirements of PCT Article 33(4), since it appears that they can be made and used in the field of automotive engineering.

Presentation Errors:

In the claims

Claims 6 to 19 should have been renumbered, since claim 5 has been incorporated into the subject matter of claim 1.

In the description

Pursuant to PCT Rule 5.1(a)(ii), the description should have cited document D1 (and also D2, where applicable) and briefly outlined the relevant prior art contained therein.

The description should have been adapted to the newly filed claims.